

What is claimed is:

1. A method of making a coating composition, comprising the steps of:
blending an epoxy material, a reactive diluent, and an acrylic resin;
reacting the epoxy material and the acrylic resin to form an epoxy
acrylate resin;
dispersing the reactive diluent and the epoxy acrylate resin into water;
and
polymerizing the reactive diluent, wherein the aqueous coating
composition formed has a volatile organic compound content of no greater than
0.4 kilogram per liter of solids.
2. The method of claim 1, wherein the epoxy material comprises diglycidyl
ether of bisphenol-A.
3. The method of claim 1, wherein the molecular weight of the epoxy
material is 350 to 6,000.
4. The method of claim 1, wherein the molecular weight of the epoxy
material is 1,500 to 4,000.
5. The method of claim 1, wherein the reactive diluent is selected from the
group consisting of ethyl acrylate, 2-ethylhexyl acrylate, methyl acrylate, butyl
acrylate, isobutyl acrylate, *tert*-butyl acrylate, 2-hydroxyethyl acrylate,
poly(ethylene glycol) acrylate, isobornyl acrylate, butyl methacrylate, methyl
methacrylate, ethyl methacrylate, isobutyl methacrylate, 2-hydroxyethyl
methacrylate, poly(ethylene glycol) methacrylate, poly(propylene glycol)
methacrylate, styrene, substituted styrene, vinyl acetate, vinyl chloride,
vinylidene chloride, acrylamide, and acrylonitrile.
6. The method of claim 1, wherein the reactive diluent comprises butyl
acrylate and styrene.

7. The method of claim 1, wherein the reactive diluent comprises butyl acrylate.
8. The method of claim 1, wherein the acrylic resin comprises a polymeric backbone having at least one pendant or terminal carboxylic acid moiety.
9. The method of claim 8, wherein the acrylic resin is formed using a monomer selected from the group consisting of acrylic acid, methacrylic acid, fumaric acid, crotonic acid, maleic acid, and itaconic acid.
10. The method of claim 8, wherein the acrylic resin is formed using a monomer selected from the group consisting of ethyl acrylate, methyl acrylate, butyl acrylate, ethyl methacrylate, methyl methacrylate, butyl methacrylate, styrene, substituted styrene, vinyl acetate, vinyl chloride, vinylidene chloride, 2-ethylhexyl acrylate, isobutyl acrylate, *tert*-butyl acrylate, 2-hydroxyethyl acrylate, poly(ethylene glycol) acrylate, isobornyl acrylate, acrylamide, and acrylonitrile.
11. The method of claim 8, wherein the acrylic resin is formed using acrylic acid, styrene, and ethyl acrylate.
12. The method of claim 1, wherein the composition further comprises an initiator.
13. The method of claim 12, wherein the initiator is selected from the group consisting of peroxides, persulfates, sulfites, bisulfites, azoalkanes, UV light initiators, and visible light initiators.
14. The method of claim 12, wherein the initiator is selected from the group consisting of benzoyl peroxide, *t*-butyl hydroperoxide, ammonium persulfate,

hydrazine, ammonium sulfites, alkali metal sulfites, bisulfites, metabisulfites, hydrosulfites, and combinations thereof.

15. The method of claim 12, wherein the initiator comprises benzoin and hydrogen peroxide.

16. The method of claim 1, wherein the volatile organic compound content of the coating composition is no greater than 0.3 kilogram per liter of solids.

17. The method of claim 1, wherein the volatile organic compound content of the coating composition is no greater than 0.2 kilogram per liter of solids.

18. The method of claim 1, wherein the volatile organic compound content of the coating composition is no greater than 0.1 kilogram per liter of solids.

19. The method of claim 1, wherein the coating composition is substantially free of formaldehyde.

20. A method of coating a substrate comprising the steps of:
applying a coating prepared according to the method of claim 1 on a substrate; and
hardening the coating.

21. The method of claim 20, wherein the substrate is metal.

22. The method of claim 20, wherein the substrate is a portion of a container.

23. A coating composition, comprising:
an aqueous dispersion of an epoxy acrylate resin and a polymerized reactive diluent,

wherein the coating composition has a volatile organic compound content of no greater than 0.4 kilogram per liter of solids.

24. A substrate coated with a coating composition prepared according to the method of claim 1.